

Impact of a Family Medicine-based transitional care intervention on the use of hospital services in older patients

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Background

Older patients are at high risk of readmission, longer stays and even death after hospital discharge¹.

Transitional care interventions are aimed at improving the discharge process:

- Multidisciplinary team-based management
- Discharge planning
- Post-discharge support and case management
- Patient education and self-management support

Literature suggests an intensified role of primary care physicians in this process².

Objectives

To determine the impact of a transitional care intervention on hospital readmission, emergency room (ER) visits, and length of stay of older adults at risk of readmission.

Methods

Intervention

A 90-day Family Medicine-based transitional care intervention: the Virtual Ward (VW)

Setting

Herzl Family Practice Center, Jewish General Hospital, Montreal, Quebec

Design

A quasi-experimental study with a historical control group

Patients

- VW group: All patients hospitalized between July 1, 2014 and June 30, 2015
- Historical control group: All patients hospitalized between July 1, 2013 and June 30, 2014
- Inclusion criteria were:
 - 65 +
 - High risk of readmission (LACE score ≥ 10)
 - Registered at the Herzl Family Practice Centre
 - Discharged to home or senior residence

Outcomes

- Proportion of ER visits at 30, 60, and 90 days post discharge
- Proportion of hospital readmissions at 30, 60, and 90 days post discharge
- Length of stay at 90 days post discharge

Statistical Analyses

- For proportions: Poisson regressions
- For LOS : Negative Binomial regression
- All models were adjusted for exposure time

Results

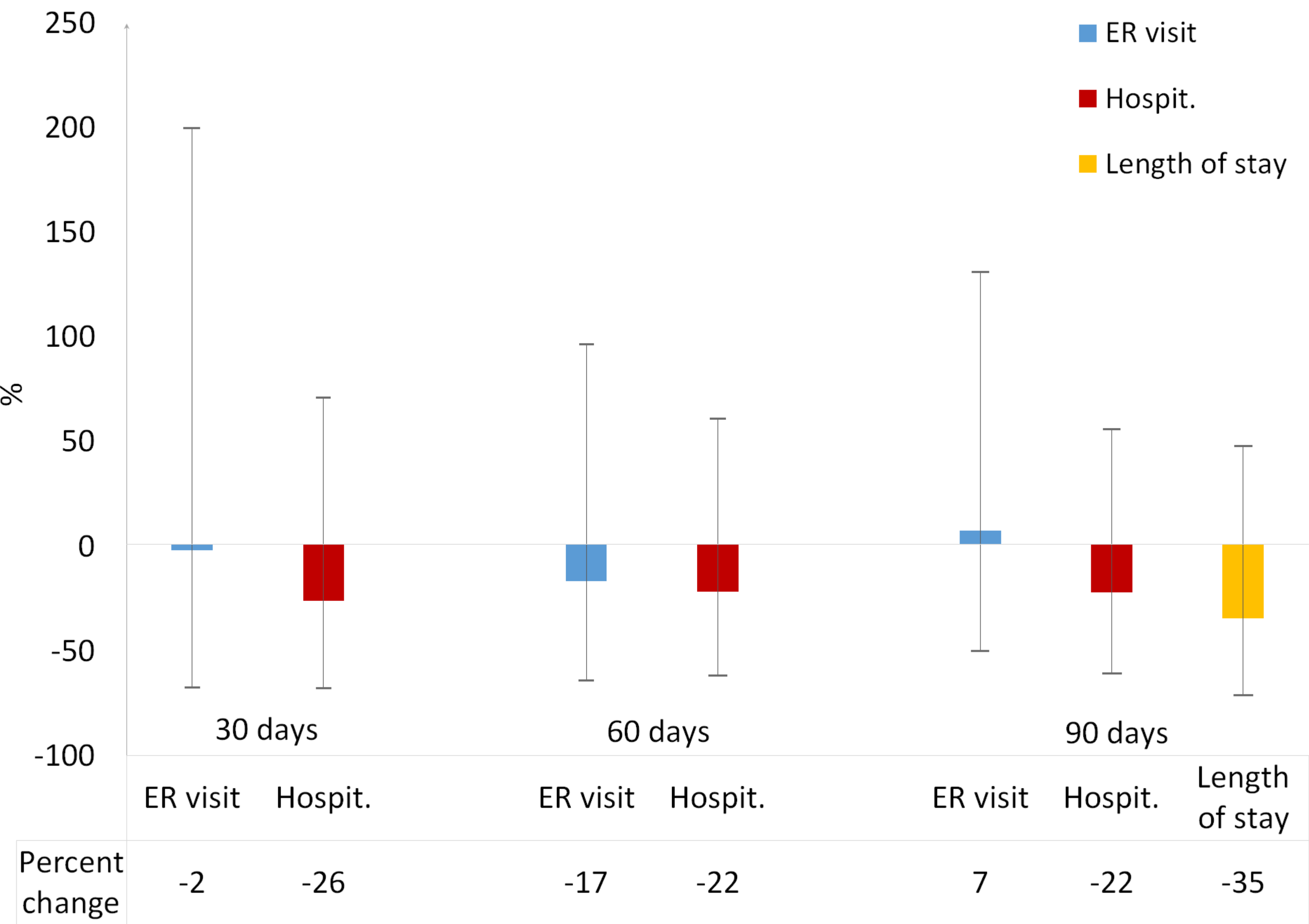
Table 1. Demographics of the patients

| | VW (n=42) | Control (n=68) |
|-------------------------|------------|----------------|
| Age (years) mean (s.d.) | 83.2 (8.5) | 83.5 (8.2) |
| LACE score, mean (s.d.) | 12.6 (2.2) | 12.7 (1.9) |
| Female, % | 60% | 65% |
| Discharge destination | | |
| home, % | 81% | 84% |
| senior residence, % | 19% | 16% |

Table 2. Use of hospital services

| | | 30 days | 60 days | 90 days |
|------------------------------------|----------|-------------|---------|---------|
| Hospitalization, % | VW group | 17% | 23% | 25% |
| | Control | 23% | 30% | 32% |
| ER visit, % | VW group | 12% | 18% | 25% |
| | Control | 11% | 22% | 23% |
| Length of stay (days), mean (s.d.) | VW group | 6.6 (17.5) | | |
| | Control | 11.7 (26.7) | | |

Figure 1. Percent change (95% CI) in use of services for the Virtual Ward group in comparison of the control group



Conclusions

Clinically meaningful decreases in ER visits, hospital readmissions and length of stay were observed between the Virtual Ward and control groups, although these differences were not statistically significant.

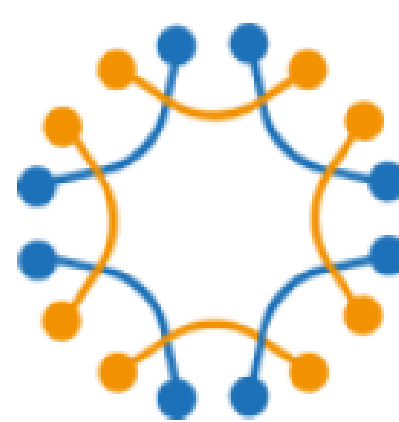
Limits

- Selection biases and secular trend bias in the selection of participants
- Pilot study, not powered for comparison

Next steps

- Look at mortality
- Look at number needed to treat
- Expand the VW to a multicenter trial

References: 1. McCloskey RM. J Am Geriatr Soc. 2011;59(4):717-24.; 2. Dhalla IA, et al. JAMA. 2014;312(13):1305-12.



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